

Final Report on Proposed Railroad Quiet Zone and Safety Improvement Project

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BACKGROUND

Rail crossings in the Eugene area can be divided into three major groups: the Union Pacific mainline through downtown and along Northwest Expressway, the Portland & Western line running north-south parallel to Highway 99, and the combination of Union Pacific and Coos Bay Line running through the industrial portions of west Eugene. This report focuses on the 10 at-grade crossings of the UP mainline between Hilyard and Van Buren Street.

Within the Eugene urban growth boundary there are 25 mainline at-grade public rail crossings with multiple daily train crossings, 14 minor at-grade public crossings with occasional weekly or monthly train crossings and over two dozen private at-grade crossings. Of the mainline at-grade crossings, 18 are under City jurisdiction and seven are Lane County's. Many of the minor or private crossings are used very little, some to the point of appearing abandoned or not having been used in years.

By far the majority of trains are operated on the Union Pacific mainline tracks. Together with Amtrak trains and including three Lane County crossings, the Union Pacific mainline is responsible for over 90% of the routine crossings horns within the urban growth boundary.

Union Pacific Mainline

The Union Pacific mainline is the busiest rail corridor in Eugene, with 19 to 23 trains per day. This 1.5-mile-long segment (*see [map](#)*) has the greatest number of crossings where horns are required to be sounded, the greatest percentage of train horn sounding (with almost 70% of routine train horn sounding for public crossings in Eugene is generated at these 10 crossings), and the greatest density of homes and businesses near the tracks. The six central crossings in this segment are one block apart with crossings at Lincoln, Lawrence, Washington, Jefferson, Madison and Monroe.

Outside the downtown segment, the Union Pacific mainline extends north along Northwest Expressway and south through Glenwood. South of 8th and Hilyard there are no at-grade crossings in the city, thus no requirement to sound train horns. The closest at-grade crossing south of Eugene is outside the urban growth boundary at 19th in Glenwood. North of Van Buren to the urban growth boundary, the Union Pacific mainline has three at-grade crossings, all under Lane County jurisdiction. These three - Irving Road, Irvington Road and Awbrey Lane - are all equipped with standard actuated entry crossing gates which close as a train approaches. Over 20% of the additional routine train horn sounding is generated at these three Lane County crossings.

First Phase of City-Wide Railroad Quiet Zone

The 10 crossings on the Union Pacific mainline between 8th/Hilyard and Van Buren constitute the first phase of a city-wide railroad quiet zone (RRQZ). The 10 crossings include 8thAvenue/Hilyard Street, High Street, Pearl Street, Lincoln Street, Lawrence Street, Washington Street, Jefferson Street, Madison Street, Monroe Street, and Van Buren Street. These 10 crossings were recommended as the first phase because of the concentration of crossings and the potential to reduce almost 70 percent of the routine train horn sounding in Eugene. In addition, all of the crossings are in City jurisdiction and only the Union Pacific Railroad is involved.

Coordination of Three Rail Projects

In addition to the RRQZ, there are two separate rail projects proposed for portions of the Union Pacific mainline. The two projects and the relationship to the RRQZ are discussed in the following paragraphs:

Eugene Depot Platform Improvements and Layover Siding

In 2011 ODOT Rail received \$1.5 million for preliminary engineering and environmental studies of a layover facility that will add much needed capacity for increased passenger rail service. The planned improvements will include a new siding to permit trains stopped in Eugene to be parked off the main line, as well as a passenger platform to serve rail passengers. The goals of this project are to provide a safer rail passenger platform facility with a dedicated passenger area for safe boarding and waiting, and to allow for the staging of trains to provide more rail capacity, and to allow rail traffic to access the main line without passing near the station. The improvements will eliminate the need for southbound passenger trains headed into Eugene to stop on the tracks along the Northwest Expressway for a freight train to pass so it can pull in and unload passengers. The anticipated funding needed to implement the first phase of the project is approximately \$3 million to \$5 million. The project will advance the goal to increase Amtrak Cascades intercity passenger train service between Eugene and Portland from two daily round trips to six daily round trips. The location of the switching equipment for the project will require the closure of the Lincoln Street crossing.

8th Avenue/Hilyard Street Railroad Crossing Relocation

The master plan for the development of the EWEB riverfront property and the Willamette to Willamette street improvement project both call for the a better connection along 8th Avenue between downtown and the Willamette River. Relocating the 8th Avenue/Hilyard Street railroad crossing would provide a more direct connection between downtown Eugene and the riverfront. However, Union Pacific would view the relocation of the 8th Avenue/Hilyard Street as a new crossing and Union Pacific policy requires that two existing crossings be closed before a permit is issued for a new crossing. The existing 8th Avenue/Hilyard Street crossing would be considered one of the two existing crossings that would be closed. Lincoln Street and Lawrence Street were identified as potential crossings that could be closed, since one or the other will be closed to facilitate the Eugene Depot Platform and siding project. In addition, closure of a crossing is considered a railroad quiet zone supplemental safety measure.

STATE AND FEDERAL PROCESS

The process for the establishment of a railroad quiet zone (RRQZ) is outlined in rules and regulations published in the Federal Register and under the authority of the Federal Railroad Administration (FRA).

This section provides an overview of the federal process for establishing a RRQZ. It is not intended to be a comprehensive description of the entire federal process of establishing a quiet zone. To establish an RRQZ, safety measures must be installed at the railroad crossings that reduce the quiet zone risk index below either the “Risk Index with Horns” or the “Nationwide Significant Risk Threshold.” The FRA has developed a web-based quiet zone calculator for determining the risk index for individual railroad crossings. A description of each risk index follows:

- *Nationwide Significant Risk Threshold* represents the average severity-weighted collision risk for all at-grade road crossings for railroads equipped with lights and gates nationwide where train horns are routinely sounded.
- *Risk Index with Horns* represents the existing condition and is the calculated risk assuming train horns are sounded at every crossing within the proposed quiet zone.
- *Quiet Zone Risk Index* is the average of the risk indexes of all the public crossings in a quiet zone. It takes into consideration the absence of the horn sound and any safety measures that may have been installed.

Options for Safety Measures

Safety measures are defined in the FRA Rules and Regulations and include supplemental safety measures (SSMs) and alternative safety measures (ASMs). SSMs include the following safety measures:

- Four-quadrant gate system (quad gates) - All of the rail crossings within the proposed quiet zone currently have two gates that block traffic in the direction of travel when the gates are lowered. A four-quadrant gate system would add two gates to fully block all traffic from entering a rail crossing when the gates are lowered. A gate would be located for each direction of traffic for each approach.
- One-way streets with gates – The conversion of a two-way street to a one-way street with gates that completely block approaching traffic when lowered.
- Medians – The addition of centerline medians separating the different directions of travel. Medians must extend a distance of 100 feet from the gate arm or, if there is an intersection within 100 feet of the gate arm, the median must extend a distance of 60 feet.
- Permanent crossing closure – Complete closure of an at-grade road crossing of a railroad to all modes of travel – motor vehicle, pedestrian and bicycle.
- Wayside horns – A horn system located at each individual crossing and directed toward approaching traffic. A wayside horn must sound at least 15 seconds prior to the arrival of a train to the crossing. A wayside horn must provide a minimum sound level of 92 dB(A) and a maximum sound level of 110 dB(A) when measured 100 feet from the centerline of the nearest track.

ASMs include modified SSMs that do not fully comply with the provisions outlined in the federal rules and regulations. For example, a median that is shorter than the required length of an SSM would be considered an ASM.

Process Steps

The first step in developing a set of safety measures (SSMs and ASMs) for a proposed RRQZ was to establish and convene a meeting of a Diagnostic Review Team. The rules and regulations stipulate

the entities that must be represented on the Diagnostic Review Team. Members of the Diagnostic Review Team include the City of Eugene as the local road authority and the applicant for a RRQZ and responsible for all capital and operation and maintenance costs, Union Pacific as the owner of the railroad and designer/contractor for any work within the railroad right of way, ODOT Rail as the state regulatory authority and issuer of crossing orders for any modifications to railroad crossings, and FRA as the federal regulatory authority and final approval authority for the establishment of a RRQZ.

The Diagnostic Review Team met in early summer 2015 and visited each railroad crossing to determine the viable safety measures for each crossing. This information was shared with the RRQZ Citizen Advisory Panel in its review and selection of safety measures for each crossing. Technical assistance from individual members of the Diagnostic Review Team was solicited periodically throughout the time in which the citizen panel was completing its work.

With the preliminary recommendation of the citizen panel, the Diagnostic Review Team reconvened in the summer of 2016 to review and comment on the proposed safety measures. The comments of the Diagnostic Review Team have been considered, and changes to the recommended safety measures have been incorporated into this report.

If the City Council accepts the recommendations in the “Final Report on Proposed Railroad Quiet Zone and Safety Improvement Project” and directs staff to move forward with the project, the City, as the local road authority, must provide a written Notice of Intent to all of the railroads operating in the proposed quiet zone and to ODOT Rail as the state regulatory authority. The purpose of the Notice of Intent is to provide an opportunity for the railroads and ODOT Rail to provide comments and recommendations to the City as it is planning the quiet zone.

The City must also apply to ODOT Rail for crossing orders for each rail crossing that is altered, relocated or closed. Pre-applications are submitted with 30 percent complete construction plans and applications are submitted with 90 percent complete construction plans. Safety is the driving factor in assessing applications. Local movement needs to also play a key role in decision making, such as when crossings provide important routes for local pedestrian, bicycle or vehicle circulation. As required by statute, ODOT must also examine opportunities to eliminate at-grade crossings, focusing on crossings that are redundant or have the greatest potential for conflicts between trains and other modes of transportation.

Upon application review, if the City, Union Pacific, and ODOT Rail all agree to proceed, ODOT Rail will draft a Proposed Order for review by the Crossing Section Manager and all interested parties (railroad, public road authority, and other interested parties). If the parties do not agree to move forward, but the applicant wishes to pursue the project, an administrative hearing process is available.

The City must also apply to the FRA for approval of a quiet zone. The requirements of the application are outlined in the FRA’s Rules and Regulations. The application must include a commitment to implement the proposed safety measures. Approval of an application for a quiet zone may occur prior to the construction of any safety measures.

Upon the completion of all safety measures by the City (within the public right of way) and Union Pacific (within the railroad right of way) the City may provide Notice of the Quiet Zone Establishment and implement the quiet zone.

RAILROAD QUIET ZONE CITIZEN ADVISORY PANEL

In November 2015, following the initial Diagnostic Team Review, Eugene Public Works Department formed an 11-member citizen advisory panel to provide input on the proposed creation of a railroad quiet zone (RRQZ) in the north downtown and Whiteaker areas of Eugene.

The charge of the citizen panel was two-fold:

- Provide a recommendation to Public Works staff for supplemental safety measures at each crossing in the rail corridor between Hilyard Street and Van Buren Street.
- Provide a recommendation for funding safety measures.

Panel Membership

The 11-member citizen panel represented a diverse cross-section of the community. Stakeholders included representatives from the Whiteaker Community Council, Downtown Neighbors Association, residents directly affected (east end), residents generally interested, business owners (west end), business owners (east end), people who bike, walk or use transit, people with disabilities, the Eugene Area Chamber of Commerce, the Eugene Sustainability Commission, and the Eugene Planning Commission.

Panel Process

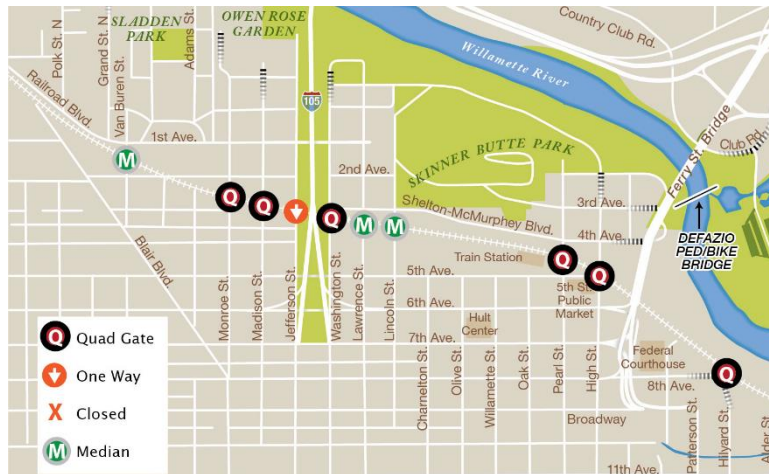
The citizen panel met seven times with the first meeting in November 2015 and the last meeting in November 2016. The panel reviewed the federal regulations regarding a railroad quiet zone and the possible safety measures at each crossing as identified by the Diagnostic Review Team, visited each crossing, discussed preferred alternatives at each crossing, and reviewed funding options and timeframes for implementing a quiet zone.

Following review and discussion of options, the citizen panel made preliminary recommendations. These recommendations were presented to the community in a variety of forums, as discussed in the public engagement section of this report. Based on the input received from the community, the panel made a series of recommendations, which are presented in this report.

Citizen panel agendas, presentation materials and meeting notes can be viewed on the internet at <http://www.eugene-or.gov/3136/RRQZ-Citizen-Advisory-Panel>.

RAILROAD QUIET ZONE PROJECT SAFETY RECOMMENDATIONS

Staff and the RRQZ Citizen Advisory Panel considered a variety of safety measures at each of the 10 crossings shown in the map to the right. The options were provided by staff following a technical review by a Diagnostic Review Team comprised of Public Works staff, a representative from Union Pacific Railroad and a representative from the Oregon Department of Transportation Rail Division. The panel members made the following recommendations for each crossing:



Van Buren Street

Recommendation: add medians to Van Buren Street. This is the lowest cost measure and does not obligate the City to an annual maintenance fee (as quad-gates do). Additionally, as part of the panel's request to upgrade safety features focused on pedestrians, two smaller-scale bell and flashing light signals will be placed on the opposite side of the street from the vehicle gates, adjacent to the sidewalk. The installation of medians was felt to be the most cost-effective safety improvement. Another technically feasible option was to install a four-gate (quad gates) system at a cost of \$735,000 vs \$220,000 for the medians. Either option would allow access to existing businesses at that area. There would be a net loss of two or three parking spaces with the median option. Several panel members expressed hope that the City would implement more substantial parking improvements in the Whiteaker neighborhood.

Monroe Street

Recommendation: install a quad-gate crossing system and add pedestrian gates across the sidewalks. Monroe Street carries 1,600 vehicles per day. It is a designated bike-boulevard with a summertime volume of 400 bikes per day, and has driveway access points within a few feet of the tracks. This crossing has also been the location of two fatal pedestrian-train crashes in the past five years. One may have been preventable, the other may not have been preventable. Panel members representing the bicycle community, as well as the Active Transportation Committee, supported the early design concept of closing the crossing to motor vehicles, but leaving it open to bikes and pedestrians. This later was determined to be impractical for the following reasons:

- FRA and Oregon rules would still define this as a public rail crossing and therefore would require active safety equipment be installed to turn the train horns off at this crossing.
- One business with an access directly adjacent to the crossing may need to be compensated for the loss of truck access that would occur. Given that the business relies on large vehicle access on a daily basis, the only viable solution is to relocate the business. The recommended quad-gate system is a less expensive option than the cost of relocating the business and compensating owners for the value of real property.

Madison Street

Recommendation: install a quad-gate system at this crossing.

Medians are not feasible due to driveway intrusions. Both closure and one-way street options would cause excessive disruption to adjacent business operations and the larger area's traffic flow (for all modes).

Jefferson Street

Recommendation: convert Jefferson Street to one-way southbound from 200 feet north of the tracks to Fifth Avenue. This will redistribute northbound vehicles (most likely split evenly between Washington and Madison). It will create approximately 15 new parking spaces on Jefferson south of the tracks. The Diagnostic Review Team determined that the only viable options for this crossing would be converting Jefferson Street to one-way southbound or closing the street. Constructing quad-gates at this crossing would not adequately isolate the crossing as a train passes through due to the rail siding into Grain Millers. The panel dismissed the closure option because Jefferson Street is critical to the daily operations of Grain Millers and several other businesses. It is on a bus route. Average daily traffic (ADT) at the tracks is 690 southbound and 480 northbound. If the street were closed, most of southbound Jefferson traffic would be diverted to Washington southbound, causing increased delay at Fifth and Washington. The commercial property owner north of the tracks requested that two-way traffic be allowed from the lot's northerly access to First Avenue. This change can be accommodated.

Washington Street

Recommendation: install a quad-gate system at this crossing. Additionally, close the sidewalk leading to the northwest corner of the crossing.

Medians are not feasible due the proximity of intersection of 3rd Ave. The citizen panel and surrounding businesses did not support converting Washington St. to one-way northbound operations. And closure was not an option given that the average daily traffic count at the crossing is 4,700. This left a quad gate system as the most viable option.

Lawrence Street

Recommendation: add medians to Lawrence Street. This is the lowest cost measure and does not obligate the City to an annual maintenance fee (as quad-gates do). Additionally, as part of the panel's request to upgrade safety features focused on pedestrians, two smaller-scale bell and flashing light signals will be placed on the opposite side of the street from the vehicle gates adjacent to the sidewalk. At one time it was the panel's preference to close Lawrence Street to accommodate the planned Amtrak layover siding. City engineers worked with the Amtrak design engineers and determined that this is not a viable option because it would negatively impact the size of freight trains from the Eugene station to the UP switching yard. Additionally, community outreach revealed that Lawrence is considered an important north-south connector and should remain open. Constructing medians may require the removal of two or three parking spaces south of the tracks. Public input was that the pavement surface needs to be rehabilitated, especially if Lincoln Street is closed.

Lincoln Street

Recommendation: add medians to Lincoln Street with a pedestrian scale bell and flasher adjacent to the sidewalk on the southerly approach. After discussions over 2-3 meetings, the panel recommended closure of Lincoln Street rather than Lawrence Street as discussed above. With the decision to construct the entrance of the Riverfront redevelopment site using the existing 8th and Hilyard crossing, the need to close Lincoln is no longer a requirement. The crossing will still require closure when the Amtrak layover siding project is constructed.

Pearl Street

Recommendation: install a quad-gate system at this crossing.

Medians are not feasible due to driveway intrusions. Both closure and one-way street options would cause excessive disruption to adjacent business operations and the larger area's traffic flow for all modes.

High Street

Recommendation: install a quad-gate system at this crossing. Because this crossing has the highest pedestrian count and the second-highest bikes-per-day count, it is recommended that pedestrian gates be installed.

During the diagnostic site review, UP and ODOT Rail strongly recommended permanently removing the southbound right-turn onto Fifth and the northbound left-turn onto High. This would effectively create a one-way street for one block of Fifth Avenue. Later consultation with FRA determined that a quad-gate system would work. Medians are not feasible due to the proximity of Fifth Avenue.

Eighth & Hilyard Street

Subsequent to the Panel recommendation for the relocation of the Eighth & Hilyard Street rail crossing, City staff developed an alternative that uses the existing crossing. The alternative includes realigning Eighth Avenue to its original alignment, using the existing rail crossing and constructing a roundabout on the EWEB Riverfront property. The roundabout provides access to both the EWEB property and the University of Oregon Riverfront Research Park. This alternative meets the goal of connecting downtown to the Willamette River along Eighth Avenue. This alternative was presented to the Diagnostic Review Team and several members of the team identified technical issues with the alternative. The City has retained an engineering consultant to conduct additional engineering analyses to address the issues identified by the Diagnostic Review Team. This alternative negates the requirement to close Lincoln Street as part of a new, realigned 8th Ave crossing. Although it should be noted that the Amtrak layover siding project would still necessitate closing Lincoln Street crossing.

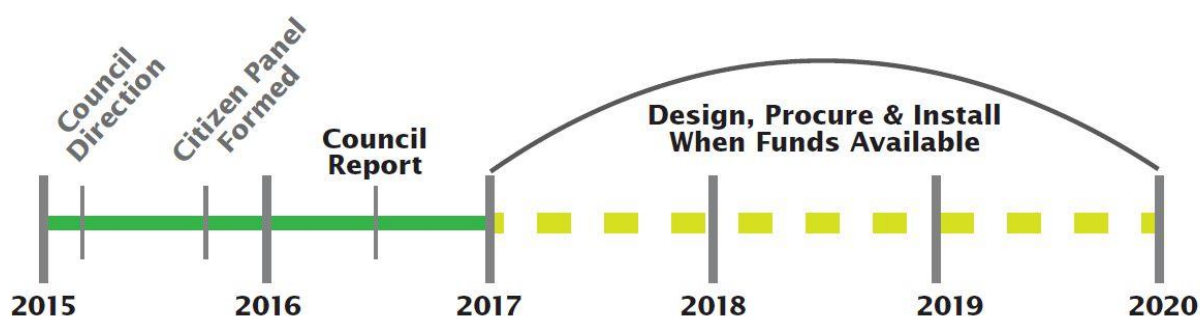
Additional Safety Improvements

In addition to the safety measures required to obtain a railroad quiet zone, panel members discussed and recommended that the project include several other safety improvements:

- *Fencing* – Panel members strongly recommended that the project include approximately 7,000 lineal feet of fencing to fill gaps and missing sections of fencing along the rail line. This is intended to discourage people from walking on or along the railroad tracks. The recommendation is based primarily on the fact that most of the train crashes in Eugene involve pedestrians or cyclists. In fact, there have been no train crashes involving motor vehicles in Eugene for more than 10 years. The cost of the fencing improvements is estimated at \$325,000 to \$350,000, and consideration would be given to fence designs that are attractive as well as effective at discouraging trespassing on railroad property.
- *Pedestrian gates* – The panel unanimously recommended including pedestrian gates at two quad-gate crossings: High Street and Monroe Street. These two crossings have the highest number of bicyclists and pedestrians and have experienced fatalities and/or serious injury over the past five years. The panel split on a recommendation of the American Council of the Blind that pedestrian gates be added at the Washington Street and Pearl Street crossings, with the majority in favor of reducing project costs by not including additional pedestrian gates at this time. Cost of constructing pedestrian gates is approximately \$200,000 per crossing. In some locations it may be possible to add pedestrian gates at a later date.

FUNDING AND IMPLEMENTATION Based on the recommendations of the RRQZ Citizen Advisory Panel, including safety measures such as fencing and pedestrian gates at four crossings, the total cost of the project is estimated in the range of \$6.8 million to \$7.3 million. Panel members considered three general approaches to funding the project: use all new revenue such as a general obligation bond; use existing revenue such as the general fund and road repair funds; or use a combination of new and existing funds, such as a bond measure coupled with money from the Riverfront Urban Renewal District (RURD), the general fund and/or road repair funds. Financing options are further detailed in a March 2, 2016, memo from City Engineer Mark Schoening to the advisory panel ([see Appendix E](#)).

The panel recommended the combination approach, with the primary sources of funding to come from RURD proceeds (about \$3.1 million) and a local bond measure (in the range of \$4 million). Several panel members urged the council to use as broad a variety of funding sources as possible to minimize the impact on any particular fund and to reduce as much as possible the amount that would need to be funded through a local bond measure. The RURD funds could only be used for work that directly benefits the district. A five-year bond measure in the range of \$4.1 million (including bond issuance costs) would cost the owner of an average \$190,000 assessed value home about \$15 per year. Council may wish to consult with the Street Repair Review Panel on the advisability of folding the quiet zone work into a street repair bond measure.



As can be seen from the timeline graphic above, even the most optimistic scenario would require approximately five years from the council's initial direction to pursue a quiet zone through the phase of constructing the actual safety measures and winning final approval of the quiet zone designation.

The availability of funding is a critical factor in the timeline. Put most simply, no work can occur until the City pays Union Pacific, in advance, for its work within the railroad's right of way. On the east end (Pearl to Hilyard) the use of Riverfront Urban Renewal District funds is recommended. Before those funds can be committed, several actions must occur, including council's approval of the expenditure of RURD funds, modification of the RURD to allow expenditures on the High and Pearl street crossings, and allocation of the funds in the FY17 supplemental budget. It is possible that these actions could be completed by December 2016, which would allow work to commence on the east end in 2017, with completion estimated in 2020.

There is less certainty around the initiation of work on the west end. A bond measure has been suggested as a preferred mechanism for funding the safety improvement from Lincoln to Van Buren streets. Most likely, the earliest a bond measure could be scheduled is fall 2017. If a measure were

placed on the November 2017 ballot and subsequently approved by voters, the assurance of funding would allow work to begin in 2018, with completion estimated in 2021.

TRIPLE BOTTOM LINE – ECONOMIC, ENVIRONMENTAL, SOCIAL EQUITY

The proposal to construct various safety improvements to qualify for a railroad quiet zone (RRQZ) in the downtown and Whiteaker areas of Eugene should take into account the social equity, environmental health and economic prosperity impacts of the project (see [definitions](#)). Through extensive public outreach and robust internal review, a number of potential impacts have been identified. Some of these effects are quite complex, with counter-balancing pros and cons and a mix of social, environmental and economic aspects. In general, five categories of impacts have been identified: [safety](#), [noise and other environmental impacts](#), [funding options](#), [socio-economic effects](#), and [social equity considerations](#).

The full analysis is provided as [Appendix F](#).

PUBLIC ENGAGEMENT ASPECT OF THE RAILROAD QUIET ZONE PROPOSAL

Implicit in the city council's March 2015 direction to staff was a desire to engage the public in the discussions of safety measures at railroad crossings in the downtown and Whiteaker areas and options for funding the construction of safety measures. The public outreach initiatives and engagement findings are detailed below.

Providing Information to the Public

The foundation of the public outreach process is a public outreach plan (see [Appendix A](#)). This plan was reviewed and refined early on by the RRQZ Citizen Advisory Panel and again prior to the initiation of stakeholder meetings. Five outreach goals were established: the public and elected officials have accurate information upon which to base opinions and decision-making; authentic listening sessions and other public involvement mechanisms ensure that staff and decision-makers have heard all ideas; citizen advisory panel members are comfortable with their role in the public engagement process; key stakeholders feel they have reasonable engagement opportunities; and awareness is increased about the preferred options for safety measures at the various crossings and the costs associated with the preferred safety options.

Information has been provided through a number of channels: a web site (www.eugene-or.gov/quietzone) was established and received more than 3,700 page views from Nov. 1, 2015, through June 30, 2016. A fact sheet was written and distributed at all stakeholder meetings and posted on the web. A short video was created and posted to the web and sent out via Facebook and Twitter. Local media also helped convey information to a broad audience. Media coverage included at least four television news stories over the past year plus at least five stories and an editorial in the Register-Guard, an editorial comment in Eugene Weekly, and 10 letters to the editor.

Perhaps most significantly, the citizen advisory panel was formed and numerous stakeholder meetings were held. While these meetings were designed primarily to receive input, a considerable amount of information was provided to participants. The information included in-depth explanations of various safety measures at specific locations, detailed discussions about financing options, and presentations on the process, legal authorities and timelines involved in forming a railroad quiet zone.

Receiving Feedback from the Public

Eugene Public Works formed the 11-person citizen advisory panel to provide input on the proposed RRQZ. The panel was charged with providing a recommendation to Public Works staff and the City Council for supplemental safety measures each crossing in the rail corridor between Hilyard Street and Van Buren Street, and also providing a recommendation for funding supplemental safety measures. The panel met seven times between November 2015 and November 2016. Details about the panel membership and meeting notes can be found at www.eugene-or.gov/3136/RRQZ-Citizen-Advisory-Panel.

In addition to the advisory panel, City staff met with more than 20 property owners (see [Appendix B](#)), many of them businesses adjacent to or near the rail crossings. Those meetings, educational in nature, allowed the interested parties the opportunity to express their opinions about the proposal. The feedback received from these meetings was shared with the citizen advisory panel and helped inform technical decisions about the feasibility of safety improvements at specific locations.

City staff also met with nine stakeholder groups including neighborhood groups, business associations and advocacy groups (see [Appendix C](#)). Discussions included an informative

presentation and a question and answer session, time permitting. In total, about 175 people participated in the stakeholder meetings.

City staff hosted an open house on April 26, 2016, at the Eugene City Library. An estimated 80 people were at the community meeting, where they discussed the proposal. Six City staff were present to answer questions and receive comments, both for and against the RRQZ. More than a dozen displays and maps filled the room, providing details about the panel's preliminary recommendation and other technical information about the project. The forum also provided a space for citizens to debate and share with each other their stance on the proposal. Attendees were asked to indicate approximately where they lived, using colored dots on a large city map. Not surprisingly, the greatest number of attendees (15) indicated the Whiteaker neighborhood, followed by downtown (7), Friendly area, Santa Clara and Southeast neighbors (3 each) and the rest from various places around the city.

The largest amount of feedback came in the form of a comment form and survey, provided at the public meetings and online. The online survey was available for more than two months. A majority of the 231 respondents expressed their views on the proposal through the online survey. *Note: the online survey methodology was not scientific and the authenticity of those responding cannot be verified.*

Summary of Feedback

While statistically valid conclusions cannot be drawn from the 475 or so comments gathered at meetings, in the form of letters and emails to staff, and through the survey form over the past several months, it is apparent that the community is split over the need, value, cost and impact of the proposed railroad quiet zone project. It is notable that very few people do not have an opinion on this topic.

The most frequent comments were about quality of life and cost (both the estimated amount and the priorities for City funding). Other common themes: affordable housing, safety, and choices people make to locate near the tracks. A more detailed analysis of survey responses and comments is provided in [Appendix D](#).

Railroad Quiet Zone Public Engagement Plan (Appendix A)



Communication and Public Engagement Objectives

- Public and elected officials have accurate information upon which to base opinions and decision-making.
- Authentic listening sessions and other public involvement mechanisms ensure that staff and decision-makers have heard all ideas.
- Citizen advisory panel members are comfortable with their role in the public engagement process
- Key stakeholders feel they have reasonable engagement opportunities.
- Awareness is increased about the preferred options for safety measures at the various crossings and the costs associated with the preferred safety options.

Communication and Public Engagement Strategies

- Identify key stakeholders, and communicate and engage with each group in ways that match needs and interests.
- Engage the Citizen Advisory Panel in identifying questions and communicating with their natural constituencies.
- Be clear up front on the purpose for engagement (how input will be used).
- Time outreach opportunities to coincide with the citizen panel recommendations
- Provide “big picture” context as well as detailed information for those interested in specific crossings
- Try to have staff present at presentations and discussion to ensure consistency of information
- Structure input so that it can be distilled into meaningful data for decision makers.
- Make it clear that the citizen panel’s recommendations are preliminary for public review and comment, and the panel will make a final set of recommendations to the staff and council after comments are received.
- Find low-resource opportunities to inform and engage broader audiences (e.g., community events, presentations to community groups, online input tools available via www.eugene-or.gov/quietzone); however, see comments about monolithic approaches, below.
- Create mechanisms to report back to stakeholders and the community on input received and decisions made.

Opportunities and Constraints

- Citizen advisory panel members represent a variety of constituencies that prefer to receive information in a variety of ways; monolithic outreach approaches will not work well.
- Citizen advisory panel members understandably are not comfortable representing an “official” point of view; rather, representatives prefer to approach outreach and messaging that will resonate with their constituencies.
- Engaging people early on helps people feel they aren’t being presented with a “done deal,” but the natural desire to respond to detailed information and recommendations requires input at a later stage in the process
- Railroad projects often take quite a bit of time to come to fruition; don’t promise quick results when it comes to the quiet zone.
- Care should be taken to not schedule public engagement activities during holidays.

Tactical Ideas

- Ask panel members to identify opportunities for meetings with key stakeholder groups
- Coordinate meetings for efficient use of staff resources.
- The project manager will continue one-on-one visits with directly affected residents and business owners
- Use web site to provide information to broader interest groups
- Schedule presentations with community groups such as neighborhood groups, downtown merchants, Downtown Rotary, League of Women Voters
- Hold a community open house, with scheduled presentations, maps and project fact sheets, a place where people could leave comments.
- Create a short video that could be taken to presentations and also placed on the project web site.
- Use social media (city has Facebook and Twitter) to send and receive information.
- Create an online survey and/or comment form to be placed on the project web site.
- Allow for written comments to be submitted.

LIST OF BUSINESSES AND PROPERTY OWNERS CONTACTED (Appendix B)

Formal Discussions:

- Wildtime Foods (Grizzles Brand)
- Battery Pros
- Saylor Painting
- Wandering Goat Coffee Shop
- Grain Millers
- REI
- Crux Rock Climbing Gym
- Oslund Associates
- A & M Auto Body
- Imperial Flooring
- Hummingbird Wholesale
- WildCraft Cider
- Tactics & Schirmer Satre Design Group (McCracken Bldg)
- Alder Street Apt, LLC (a.k.a. Rick Duncan – 7 tax lots)
- 5th Street Market Merchants

Informal Discussions:

- Old Dominion Auto Body
- Eugene Wine Cellars
- A&M Auto Body
- Bob Macherione, owner of 154 Lawrence
- Venue 252 Owner Rick Wright

ANALYSIS* OF OPINIONS ON RRQZ FROM COMMUNITY PRESENTATIONS (Appendix C)

Source	# of people	Opinion	Themes
R-G letters to editor	12	Pretty much opposed, none in favor	Biggest concern is cost (and who pays); risk and alternate ideas as options
BPAC	10	Somewhat opposed	Priority questioned, don't want PBM spent on RRQZ
Meeting of businesses	10	Neutral to somewhat in favor	Concerns about funding vs ideas that a quiet zone could increase property values
Council of Blind	9	Neutral	Safety concerns; would want more ped gates
LILA	6	In favor	Safety questions; hoping to find non-city funds for project
Market District businesses	16	In favor	Questions about east end project elements, especially quad gates at High Street
Chamber LGAC	12	No opinion at this time	Stance recommended (?); questions about need and priorities for fund
Ya-Po-Ah Terrace	40	In favor	Concern about noise; questions about process and effectiveness
Whiteaker Community Council	50	Generally opposed	Concerned about impact on neighborhood
Community open house	80	Split	Wide range of ideas, opinions and questions
Human Rights Commission	22	Neutral	Mostly informational presentation

**** This analysis is based on a limited number of interactions, and the results cannot be considered statistically accurate.***

RAILROAD QUIET ZONE PUBLIC SURVEY ANALYSIS* (Appendix D)

The survey asked six questions: how close do you live or work to the downtown rail line; would you like to have a quiet zone established in Eugene; how do you think a quiet zone should be funded; what do you like about the proposal to create a quiet zone in Eugene; what changes would you like to see in the proposal; and do you have any other comments about a railroad quiet zone. Name and email information was optional for respondents.

Question	Count	Percentage
<i>Support for Quiet Zone?</i>		
Yes	124	53%
No	103	45%
No answer	4	2%
<i>Proximity to quiet zone in work or residence?</i>		
Within ¼ mile	100	43%
¼ to 1 mile	53	23%
1 mile or more	77	33%
<i>What percentage of the “within ¼ mile” respondents said yes?</i>	45	46% of ¼ mile respondents
<i>What percentage of the “within ¼ mile” respondents said no?</i>	51	53% of ¼ mile respondents [50% of total “no” survey responses]

*** The online survey was not scientific and the authenticity of those responding cannot be verified.**

In addition to quantitative analysis (counting and comparing the numbers of certain responses) a qualitative analysis was done to identify key themes in the responses.

Key themes in “What do you like about the proposal” responses

- Noise pollution relief, improved quality of life, and or improved sleep
 - 35 mentions
- Funding options, combination of sources, spread out over time
 - 10 mentions
- Other themes:
 - Improves safety
 - Public outreach and engagement
 - Helps businesses
 - Crossing improvements, quad gates
 - Look at Salem and other cities with quiet zones

Key themes in “what changes would you like to see” responses

- Expand quiet zone
 - 11 mentions [majority mention including Irvington area]
- Identify other funding sources, lower cost
 - 17 mentions
- Concerns over street closures, Lawrence vs. Lincoln, Jefferson as a one way, prefer gates and signage over closures
 - 16 mentions

- Postpone until other priorities are met, addressing homelessness
 - 8 mentions
- Other themes:
 - Include bicycle and pedestrian improvements, safety
 - Provide more specific around sounds and safety after implementation of proposed quiet zone, and funding
 - Examine alternatives, such as fences, lighting, tunnel

Key themes in “funding” responses

- Using the financial strategies memo, respondents indicated with approach they favored:
 - Proposal 1 (one large GO bond) – 12 in favor
 - Proposal 2 (combine RURD and GO bond) – 10 in favor
 - Proposal 3 (use existing and new revenue) – 26 in favor
- 22 respondents described a combination of funding sources, this most closely resembles option 3, and combining these results gives 46 for proposal 3. This is 24% of the total response and 66% of those that selected a proposal (46/70).
- 192 responded to this question out of 229 total survey responses for an 84% participation rate.

Key themes in “other comments”

- Would like quiet zone, in support of, as soon as possible, grateful for process, bothered by the noise, long over due
 - 58 mentions
- Project not a priority for City, waste of money, cost too high
 - 33 mentions
- Affordable housing, equity, gentrification concerns
 - 21 mentions
- Proximity to railroad as choice
 - 18 mentions
- Enjoy listening to horns, not bothered by the sound or trains were here first mentions
 - 18 mentions
- Does not improve safety
 - 16 mentions
 - Includes 2 comments on accessibility concerns
- Whiteaker neighborhood
 - 14 mentions
- Benefits developers at expense of local community
 - 8 mentions
- Other themes:
 - Noise pollution, quality of life, improves safety
 - Street closures, Lincoln and other
 - Expanding quiet zone

Memorandum

Date: March 2, 2016
To: Railroad Quiet Zone Citizen Advisory Panel
From: Mark Schoening, P.E., City Engineer
Subject: Railroad Quiet Zone – Potential Funding Sources for Implementation

An outline of the potential funding sources that may be used to fund the capital improvements to implement a railroad quiet zone is shown on Attachment A. The document includes a description of each funding source and the impacts to existing city services if funds from a particular source are reprioritized to implement a railroad quiet zone.

Below are three straw funding proposals for consideration by the Citizen Panel. The straw proposals assume a particular safety measure at each of the 10 crossings, even though the Citizen Panel has not yet reached a final recommendation for each crossing.

Straw Proposal #1

- Fund the entire Railroad Quiet Zone implementation through a general obligation bond at an estimated cost of \$6,485,000.

Straw Proposal #2

- Fund the railroad quiet zone improvements at Pearl Street, High Street and Hilyard Street/8th Avenue through Riverfront Urban Renewal District funds at an estimated cost of \$3,105,000.
- Fund the remaining seven crossings through a general obligation bond at an estimated cost of \$3,380,000.

Straw Proposal #3

- Fund the railroad quiet zone improvements at Pearl Street, High Street and Hilyard Street/8th Avenue through Riverfront Urban Renewal District funds at an estimated cost of \$3,105,000.
- Fund the closure of one crossing through an ODOT Rail or UPRR grant at an estimated cost of \$100,000.
- For the remaining six crossings:
 - Fund improvements within the street right-of-way with local gas tax funds at an estimated cost of \$642,500.
 - Fund improvements within the railroad right-of-way with General Fund Capital funds at an estimated cost of \$2,187,500.
 - Fund pedestrian improvements with 2012 Street Repair Bond Measure – Bicycle and Pedestrian Component funds at an estimated cost of \$450,000.

Attachment

Railroad Quiet Zone Implementation Potential Funding Sources

General Fund

Description - The General Fund is the largest fund used to account for discretionary expenditures and revenues. The fund is flexible and relies upon stable revenue sources, primarily property taxes. Use of General Funds is at the annual discretion of the City Council.

Impacts to Existing Services - Public safety represents 55% of total General Fund spending, followed by culture and leisure, central business functions, and infrastructure and planning. While the fund has stabilized post - recession, there are still insufficient resources to sustainably fund existing services.

Street Repair Bond Measure Add On (General Obligation Bond)

Description - A general obligation bond is a debt instrument that allows the City to raise additional revenues for specific purposes by getting voter approval to raise property taxes to repay principal and interest on debt. This is a familiar funding mechanism that would require voter approval of new taxes. Bond issuance costs for an addition to the street repair bond measure would range from about 1% to 1.5% of the additional project amount.

Impacts to Existing Services - The City has passed two consecutive GO bond measures (2008 and 2012) to fix streets and is on track for a third bond measure in the fall of 2017. The Street Repair Review Panel (SRRP), a citizen advisory group, reviews the annual bond measure expenditures and advises staff on future bond measures. The SRRP strongly believes the success of the bond measure is attributed to its almost singular focus on repairing streets and does not support including additional capital projects such as the railroad quiet zone safety measures in the next bond measure.

Railroad Quiet Zone Bond Measure (General Obligation Bond)

Description - A general obligation bond is a debt instrument that allows the City to raise additional revenues for specific purposes by getting voter approval to raise property taxes to repay principal and interest on debt. This is a familiar funding mechanism that would require voter approval of new taxes. For a bond measure ranging from \$5 million to \$10 million the bond issuance costs would range from \$100,000 to \$200,000.

Impacts to Existing Services - This would be a new revenue source and would not impact existing services. However, consideration should be given to coordinating other tax increase requests for capital bond projects (streets, parks) or operating levies.

Community Development Block Grant Funds

Description - The Eugene-Springfield 2015 Consolidated Plan presents a strategic vision for housing and community development for the period beginning in July 2015 and ending in June 2020. The priority needs and goals outlined are based on an analysis of community needs and an extensive community outreach process.

The cities of Eugene and Springfield must complete and adopt a Consolidated Plan every five years to receive Community Development Block Grant (CDBG), HOME Investment Partnership Program (HOME), and other HUD grants. The purpose of CDBG and HOME is to advance the following statutory objectives principally for extremely low-income, low-income, and moderate-income residents.

One of the six priority needs identified is - Low-Income Areas & Areas of Slums and Blight - Geographic areas defined as areas of slums and blight or as low-income areas need additional support for rehabilitation and public facility improvements. One of the strategies to address this priority need is - Make strategic investments to improve low income neighborhoods and other areas of slums and blight.

The entirety of the railroad quiet zone is within CDBG eligible neighborhoods. The City of Eugene's Fiscal Year 2016 CDBG Entitlement Grant was \$1,236,946.

Impacts to Existing Services – The CDBG Advisory Committee recommends proposed uses of CDBG funds to address the six priority needs through an annual Action Plan adopted by the City Council. CDBG funds are the primary source of funds used to address the community's affordable housing needs and services that benefit low-income residents. Despite the growing needs in the community, the annual CDBG allocation has remained flat and the ability to address affordable housing and social service needs in the community are not being fully met. Funding a portion of the railroad quiet zone capital improvements would only exacerbate the funding gap.

Local Improvement District

Description – Railroad quiet zone improvements could be funded by assessments to benefitting properties. The boundary of a local improvement district may be based upon sound intensity and the apportionment of costs may be based upon land use. Chapter 7 of the Eugene Code provides the regulatory framework for establishing local improvement districts. The City of Eugene used this method of funding for the sound walls on the north side of I-105 and the City of Vancouver used this method of funding to implement its railroad quiet zone.

Impacts to Existing Services – There would not be a significant impact to existing services since most of the funding would come from assessments to benefitting properties (in some cases the City picks up a share of improvement costs).

Riverfront Urban Renewal District

Description – The Fiscal Year 2016 Budget includes approximately \$9,400,000 in available funds that can be used for capital projects included in the Riverfront Urban Renewal District (RURD) Plan. The maximum indebtedness or spending cap over the life of the RURD is \$34,800,000. A portion of the spending capacity has already been committed leaving approximately \$25 - \$30 million for additional projects over the life of the RURD. The relocation of the railroad crossing at Hilyard Street/8th Avenue is identified in the plan. The railroad crossings at High Street and Pearl Street could be added to the RURD plan with a minor amendment.

Impacts to Existing Services – Funding of quiet zone safety improvements at Hilyard Street/8th Avenue, High Street and Pearl Street are within the financial capacity of the Riverfront Urban Renewal District.

General Fund Capital Reprioritization

Description – The 2016-2017 Capital Improvement Program (CIP) includes \$23.3 million in general fund capital improvements over six years. The CIP is updated every two years and will next be updated in 2017. The railroad quiet zone could be prioritized over other (primarily city buildings and parks) capital needs.

Impacts to Existing Services – In the 2016-2017 CIP the general capital funds are allocated as shown below:

- Park and Open Space - \$2.127 M
- Building Services Systems - \$5.372 M
- Health, Safety & Welfare - \$3.705 M
- Primary Building Systems - \$7.413 M
- Secondary Building Systems - \$1.699 M
- ADA Renovations - \$0.920 M
- General Site & Facility - \$1.878 M

All of these program areas are focused on the rehabilitation of existing parks and public buildings and the program areas are currently underfunded and not sufficient to meet the rehabilitation needs of the City's parks and public buildings. Using these funds for the railroad quiet zone would mean there would be fewer dollars available for other high-priority capital repair and preservation projects.

Transportation System Development Charge Reimbursement Fee

Description – The reimbursement fee component of the transportation system development charge (SDC) may be spent on capital improvements to the City's transportation system. Annual transportation SDC reimbursement revenue is approximately \$300,000. A Council resolution directed staff to prioritize the use of these funds for pavement preservation of the City's arterial and collector street system.

Impacts to Existing Services – These funds have been used on pavement preservation projects for the past 14 years. The strategy for funding of the pavement preservation program includes using multiple sources of funds. The current pavement preservation backlog is \$79 million, and the council has indicated an interest in continuing to reduce the backlog.

Local Gas Tax

Description – In August 2003, the City of Eugene implemented a local motor vehicle fuel tax that currently is 5 cents per gallon. Annual revenues from the local gas tax are approximately \$3 million. The revenues from the local gas tax are dedicated to the reconstruction, repair, maintenance, operation and preservation of city-owned roads and streets. The gas tax ordinance stipulates that no revenue shall be used for capacity-enhancing street improvements. The Oregon state constitution limits the use of gas tax revenue to the public right of way.

Elements of the railroad quiet zone safety measures (medians, curbs, etc.) located in the street right of way are eligible for gas tax revenues.

Impacts to Existing Services - The revenues raised from the local fuel tax have been limited to capital preservation projects. The strategy for funding of the pavement preservation program includes using multiple sources of funds. The current pavement preservation backlog is \$79 million. This represents a continued decline in the backlog from a peak of \$173 million in 2007.

Federal Surface Transportation-Urban (STP-U) Funds

Description – The Central Lane Metropolitan Planning Organization (MPO) receives federal transportation funds through the Federal Surface Transportation Program Urban (STP-U) funds. STP-U funds are allocated and programmed for eligible projects at the discretion of the MPO, following federal guidelines. These federal funds must be matched with local funds or other non-federal funds at a minimum currently set at 10.27 percent of the total funding. The MPO Policy Board has approved a process and framework for allocating the MPO's STP-U funds. The process includes the use of a set of screening or eligibility criteria and a set of evaluation criteria and guidelines to be applied to applications for STP-U funding. The evaluation criteria and guidelines focus on four regional priorities: Preservation of Existing Transportation Assets; Preservation or Enhancement of Transit Service; Safety Improvements; and Reducing Greenhouse Gas Emissions. Only streets functionally classified as arterials and collectors are eligible for STP-U funds. This would include High Street, Pearl Street, Washington Street, Jefferson Street and Van Buren Street. The City receives approximately \$1.25 million in STP-U funds on average annually. STP-U funds have been allocated through Fiscal Year 2018.

Impacts to Existing Services – The City has focused its applications for federal STP-U funds on the preservation and maintenance of the existing shared-use path system and arterial and collector streets. The strategy for funding of the pavement preservation program includes using multiple sources of funds. The current pavement preservation back log is \$79 million. This represents a continued decline in the backlog from a peak of \$173 million in 2007.

2012 Street Repair Bond Measure – Bicycle and Pedestrian Component

Description – The 2012 Street Repair Bond Measure allocated an annual average of \$516,000 over a period of five years to support bicycle and pedestrian projects guided by the Pedestrian and Bicycle Master Plan, City staff and the Bicycle and Pedestrian Advisory Committee (BPAC). Several of the railroad crossings within the railroad quiet zone have experienced pedestrian fatalities and serious injuries. Enhanced pedestrian safety measures (pedestrian gates and signals, and relocated sidewalks) have been proposed for these railroad crossings and are eligible for funding through the bicycle and pedestrian component of the 2012 Street Repair Bond Measure.

Impacts to Existing Services – The BPAC has identified substantially more projects than can be funded by the bicycle and pedestrian component of the 2012 Street Repair Bond Measure. It is unclear how the railroad quiet zone pedestrian safety measures would rank in priority for funding.

TRIPLE BOTTOM LINE ANALYSIS OF PROPOSED RAILROAD QUIET ZONE PROJECT

*Prepared by Eugene Public Works
June 30, 2016*



The proposal to construct various safety improvements to qualify for a railroad quiet zone (RRQZ) in the downtown and Whiteaker areas of Eugene should take into account the social equity, environmental health and economic prosperity impacts of the project (see [definitions](#)). Through extensive public outreach and robust internal review, a number of potential impacts have been identified. Some of these effects are quite complex, with counter-balancing pros and cons and a mix of social, environmental and economic aspects. In general, five categories of impacts have been identified: [safety](#), [noise and other environmental impacts](#), [funding options](#), [socio-economic effects](#), and [social equity considerations](#).

Safety

This category includes injury/fatality avoidance, safety for people who drive, ride bikes or walk, safety for people with disabilities, and fencing.

- *Injury/fatality avoidance* – Safety measures have a significant economic impact. The U.S. Department of Transportation [calculates](#) that the economic value of a statistical life (VSL) is \$9.2 million. This VSL is the basis for assessing the economic benefits of preventing fatalities.
- *Safety for motorists* – Preventing train-vehicle crashes is a primary objective of the rules governing train operations and when granting quiet zone designations. Options for quiet zone safety measures allowed under Federal Rail Administration rules are fairly limited and include installing quad gates, converting streets to one-way flow with gates, installing medians through the crossing, or closing a crossing to all use. Alternative safety measures may be used to achieve a quiet zone, if they reduce the risk index to at or below the risk index with horns. Staff and members of the citizen advisory panel have recommended options that mitigate the impact of safety measures on the operation of area businesses. Similar attention was paid to the effects safety measures would have on neighborhood transportation connectivity and diversion of traffic to adjacent streets.
- *Safety for bicyclists and pedestrians* – While FRA's quiet zone safety measures do not require FRA-approved safety improvements for people who bike and walk, Eugene's five-year train crash history makes the need clear: no vehicle crashes in the last five years, but seven bicyclists or pedestrians killed or injured. Bike bollards, pedestrian gates, and fencing (discussed below) would likely stop some but not all of these types of crashes. Economically, a pedestrian gate at a rail crossing costs about \$200,000 for two gates at a typical crossing on a two-way street. The issue of people walking or lying on the railroad tracks is discussed below ([Social Equity: Trespass on railroad property](#)). Some communities such as San Diego have focused on education and enforcement to convey to bicyclists and pedestrians the importance of obeying signals and signage when crossing the tracks.
- *Safety for people with disabilities* – People with vision impairments have expressed concern about safety awareness if trains don't sound their horns as they approach a crossing. Public Works staff went to several listening sessions (Lane Independent Living Association and American Council of the Blind) to hear and address these concerns. Awareness of approaching trains can be achieved in several ways: bells that ring at each crossing when trains approach; pedestrian gates that physically block the sidewalk when the vehicle gates are lowered; and reflective warning signs and flashing lights (for those with partial vision). Specifically, advocates for people with disabilities asked to have pedestrian gates installed

at all crossings on streets with bus routes. On a split vote, the members of the citizen advisory panel recommended that pedestrian gates be installed initially only on High and Monroe streets, and that pedestrian gates on Washington, Pearl and other streets be considered later, as funds and opportunities allow. Another concern was the time it takes to cross the tracks in a wheelchair, especially if the crossing grade is in poor repair. The safety improvement project would bring all crossings to current ADA standards.

- *Fencing* – A unanimous recommendation by the citizen panel to install 7,000 lineal feet of fencing to fill in gaps along the rail corridor from High to Chambers streets at an approximate cost of \$300,000 was expressly intended to improve safety, particularly for people who walk and bike. Fencing is not a requirement for a railroad quiet zone; however, panel members felt the safety benefits of the fencing outweigh its costs. Thought was given to the design of the fencing and its aesthetic impact on adjacent homes and businesses. There was discussion about financial equity if abutting property owners are required to maintain the fencing, similar to how property owners currently are responsible for keeping their sidewalks in safe condition.

Noise and Other Environmental Impacts

One of the most obvious environmental factors to be considered in establishing a train horn quiet zone is noise. This category can be looked at in several ways.

- *Measurement of train horn sounds* – Under federal rules issued in 2005, a train engineer is required to sound the horn (two long, one short, and one long blast) starting 15 to 20 seconds approximately ¼ mile prior to a crossing, and the horn shall be repeated or prolonged until the locomotive occupies the crossing. The horns must be a minimum 96 decibels (dB) to a maximum 110 dB, measured 100 feet in front of the train.
- *Sound impact* – A sound impact qualitative analysis done by Public Works Engineering shows that train horns in the 10 crossings may be as loud as 75 decibels on Garfield Street to the west, the University of Oregon campus on the east, 11th to 13th avenues on the south, and Country Club Road on the north.
- *Effects of noise pollution on health and livability* – Many Eugene residents believe that noise pollution from train horns causes mental and physical health issues. Lack of sleep is a commonly cited problem. During the public outreach phase of the project staff received nearly 100 specific complaints about the damaging effects of train horns on health and livability. A number of these complaints were from the south Eugene area, well beyond the 75 dB range used for the sound impact analysis. Eighteen people commented that they enjoy the sounds of train horns.
- *Economic effects of noise* – Existing businesses for the most part have found ways to cope with train horns. That said, most existing businesses close to the tracks support a quiet zone and the positive effects it would have on customer experience and internal operations. It's harder to judge the impact of train horns on new developments. It has been reported that some developers will only move ahead on projects if a quiet zone is established. Federally subsidized housing projects must meet ambient noise standards that would be exceeded by current train horn noise levels. The implication of this is that new commercial developments and affordable housing projects would not be built unless there were a quiet zone in place with the day-night average noise levels less than 75 decibels.
- *Opinions of train horn noise* – While the quantity of train horn noise can be measured objectively, the quality of the sound is a matter of opinion. Many people find the noise objectionable and cite the deleterious effects on health and livability noted above. Others say the sound is soothing and reminiscent of earlier days in Eugene's history. And there are

those who believe that the warning afforded by train horns outweighs the disturbance caused by the loud sound.

- *Greenhouse gas emissions* – The City’s traffic operations staff reviewed the quiet zone proposal and found that it would have little to no effect on GHG emissions from idling motor vehicles. Several of the safety measures could create some minor out-of-direction travel resulting in a slight increase in vehicle miles traveled (VMT). The project does not affect any existing transit routes. The project improves safety for people who bike and walk, and it does not preclude any alternative mode projects or other projects in the new transportation system plan.

Funding Options

This area of analysis focuses primarily on economic issues. However, tax policies and other funding impacts can have social equity consequences as well.

- *Tax policy* – This factor recognizes that policies may affect how tax burdens are distributed, what levels of taxation are acceptable, and what the priorities are for existing and new funding streams. An equity concern that came up during the public comment period was “why should I pay to help someone who chose to live by the tracks?” In terms of economic prosperity, we heard that an investment in a quiet zone would stimulate investments in development and affordable housing.
- *The cost of the project* – The current estimated cost of fully implementing the railroad quiet zone project is \$6.8 million to \$7.3 million. This significant investment in community infrastructure requires a well-developed funding plan and makes it unlikely that a single source of revenue can be tapped for the full cost.
- *Cost-cutting measures* – As noted above, the cost of the project is seen as substantial by many residents, including members of the quiet zone advisory panel. The panel weighed a number of factors, including cost, when considering options for safety improvements. The panel’s recommendations include several cost-cutting measures (such as a median rather than quad gates at the Van Buren crossing, medians on Lincoln and Lawrence Street, and an incremental approach to installing pedestrian gates at various crossings).
- *Options for funding the project* – Staff identified three general options for funding the project: use existing revenues; find new sources of revenue; or use a combination of new and existing revenues. Citizen advisory panel members and the majority of comments received from residents favored the combination approach. Existing revenues could include funding from the Riverfront Urban Renewal District, the City’s General Fund, local gas tax funds (limited to work in the right of way), and/or funding earmarked for projects that benefit people who bike and walk. New funds could come from a general obligation bond, either as a stand-alone measure or coupled with another bond measure. The impacts of these options on the triple bottom line are complex and might best be considered at a higher level such as tax policy.
- *Project implementation* – A strategy to reduce the short-term funding impact of the project while preserving project momentum would be to implement the project in stages. If the easterly portion of the project (Hilyard to Pearl streets) were constructed first, a significant portion of the work could be done using urban renewal funds. This would allow more time to develop funding options for the west end. However, there may be an equity issue with quiet zone supporters who might feel left out, especially if the later phases of the project are delayed.

Social and demographic analysis – According to the [Livability Lane Toolkit](#), in the neighborhoods in the vicinity of the rail line between Jefferson and Chambers streets in (census tracts 32 and 18),

11% to 16.9% of the people living there are people of color, between 16% and 30.5% of people have a disability and between 20% and 39.9% of people are experiencing poverty. Directly adjacent to the proposed railroad quiet zone are two of the tracts with the highest concentration of communities of color with estimated populations between 17% and 22.8% as well as higher levels of people living with disabilities and in poverty. Staff will continue to look for specific actions such as providing informational signage in Spanish and English to make the project as inclusive as possible.

Staff also engaged residents through the Lane Independent Living Alliance (LILA) and the local chapter of the American Council of the Blind. These groups had numerous safety concerns and recommendations to make the proposed safety improvements useful to the disabled community (see discussion above under [Safety for people with disabilities](#)).

Socio-Economic Effects

This category includes potential impacts on property values, neighborhood character, affordable housing, business impacts, and parking.

- *Increased property values* – This is both an economic and a social consideration. There appears to be general agreement that property values increase in areas near railroad tracks when routine train horns are silenced. A [2013 analysis](#) of home values in Plymouth, Massachusetts, concluded that a quiet zone would increase market values for residential properties in the range of 10%. A 2016 study, "[Silence is Golden: Railroad Noise Pollution and Property Values](#)," by Jay Walker of Niagara University, found that the assessed value of residential properties in Memphis, Tennessee, within the 65 decibel range of train operations was 13% below properties with less noise exposure. That study also found no significant property value decrease among commercial properties. A 2006 study on "[The economic valuation of train horn noise](#)" by William Bellinger of the Dickinson College of Economics found that residential property values were found to decrease by about \$4800, or 4.1% of the sales value, per 10 decibels of added noise exposure.

Economically, this quiet zone effect might be seen as positive by those who own residential property for personal or business investment purposes. However, to realize the economic benefit, the property owner would have to sell or redevelop the property. Homeowners may see increases in real market value; however, due to Oregon's "split roll" tax structure, the taxable assessed value could rise no more than 3% a year, mitigating the potential burden of increased property taxes. On the social equity side, the concern is affordable housing. A rise in housing prices could be mitigated by financial assistance programs for low-income and/or low-income elderly homeowners such as state age/income deferral programs. It also may be possible to create a subsidy program such as the City's income subsidy program for assessment financing; however, funding would need to be identified for such a program.

The studies cited above are silent on the effect of increased property values on renters. While a portion of the costs associated with higher property values and redevelopment may be passed along to renters, demand for housing is a significant factor in determining rents. It's reasonable to assume that the silencing of routine train horns would increase livability in the downtown and Whiteaker areas. Increased livability may create more demand for housing and lead to higher rents absent development agreements or other incentives to control rents. It should be noted that there are many factors beyond the creation of a quiet zone that go into determining livability, property values and related policies for affordable housing and rent protection.

- *Neighborhood character* – This is a social equity concern, particularly in the Whiteaker neighborhood. A guiding planning document, the [Whiteaker Plan](#), has been reviewed by staff, and the safety improvements needed to qualify for a quiet zone have been found to be consistent with the refinement plan. At the same time, a wide range of urban amenities and a reputation as a cultural hot spot already have made this neighborhood attractive to commercial development. The quality-of-life benefits of a quiet zone could be an additional catalyst for residential and commercial redevelopment.

This trend is not unique to the Whiteaker neighborhood, nor is it specific to railroad quiet zones. As documented by the Associated Press ([“Urban Eyesores”](#)) in tight housing markets, particularly in large urban areas, demand for residential property appears to outweigh factors such as noise from trains and freeways, industrial landscapes and other traditionally negative purchasing incentives.

- *Business impacts* – As discussed above ([Safety for motorists](#)) several businesses were concerned about how safety measures would affect their operations, including customer access and freight delivery routes. Public Works staff worked one-on-one with these businesses to identify their concerns and look for workable solutions. The citizen advisory panel included a representative from the Eugene Area Chamber of Commerce, who helped facilitate a listening session with local businesses. In making their recommendations, the members of the citizen advisory panel chose safety measures that had the least impact on businesses. Considerations related to effects a quiet zone may have on development are discussed above ([Economic effects of noise](#)).
- *Parking* – In the citizen advisory panel discussions, concerns were raised about parking availability in the Whiteaker neighborhood and the potential loss of several parking spaces if a median were installed as a safety measure on Van Buren Street. Staff estimates that two parking spaces may be removed using the median option. No other concerns have been expressed about the impact of safety measures on parking on other streets. While the parking impact related to the quiet zone project appears to be minimal, the broader concern about parking in the Whiteaker neighborhood may be an issue that deserves further study.

Social Equity

There are potential equity issues beyond the socio-economic impacts described above.

- *Trespass on railroad property* – Why do people walk on the tracks (i.e., trespass on railroad property)? In many cases, the tracks are the “desire line” for people who are traveling east and west through the north downtown area. Staff is trying to identify obstacles that may discourage people from using sidewalks. Fencing may help people make safer choices, especially if the fencing is combined with education and enforcement and if reasonable walking options are provided. Other communities have used disincentives such as trespass fines to discourage walking along the tracks. A common concern heard during public outreach was that quiet zone efforts will be in vain if people continue to walk on the tracks, because trains will blow their horns as a warning, even in a quiet zone.
- *Homelessness* – While there doesn’t appear to be a direct connection between the establishment of a quiet zone and homelessness, indirect connections exist. To the extent that the General Fund is used to pay for quiet zone safety improvements, that money is not available for other needs, such as addressing homelessness. As discussed above ([Socio-economic effects](#)), increased livability may increase demand for housing, driving out those who cannot afford higher housing costs. Homeless campers living along the rail line are among those who may walk on the tracks. Equity impacts can be somewhat mitigated by

listening to the concerns of the homeless and trying to find workable solutions within the context of the quiet zone safety project.

- *Scope of project* – Staff has received requests from residents in the River Road/Santa Clara area to expand the quiet zone to include the Irving, Irvington and Awbrey crossings. Lane County has jurisdictional authority for all three of these crossings. However, several of the people in this area are city residents and feel they should be included in the current effort to establish a quiet zone in the 10 downtown and Whiteaker crossings. Their offer to help pay for the safety improvements at these crossings raises a tax policy equity question: is it fair to directly assess some property owners, but not all, for a certain type of improvement?

TBL DEFINITIONS

- **Social Equity (Soc)** - How might a proposal or action affect the ability to meet basic human needs? How could it influence cultural expression, community relationships, effective government, safety and personal security needs, and neighborhood and stakeholder commitment and stewardship? Are there potential inequities for specific groups of people, and how are those addressed? Have all voices been heard?
- **Environmental Health (Env)** - How could a proposal or action affect environmental health and our ability to effectively address climate uncertainties? Does it prevent pollution? What the possible impacts for air, soil and water? How might it affect how our community looks?
- **Economic Prosperity (Econ)** - How would an action or proposal affect the local economy and what are its costs to the community, now and over the long term? How does the proposal or action support responsible stewardship of public resources? **Economic prosperity** considers the effect on the local economy, costs to the community (including long-term costs) and responsible stewardship of public resources. The analysis looked at four factors in this category: development opportunities; impacts on businesses directly affected by the project; the overall cost of the project (including long-term operation and maintenance costs); and the options for funding the project.